



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,048	08/28/2001	Takeshi Nishi	SEL 274	5731

7590 03/29/2007
COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
SUITE 2850
200 WEST ADAMS STREET
CHICAGO, IL 60606

EXAMINER	
YAMNITZKY, MARIE ROSE	
ART UNIT	PAPER NUMBER
1774	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/941,048

Applicant(s)

NISHI ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-12 and 15-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-12 and 15-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

1. This Office action is in response to applicant's amendment filed January 18, 2007, which adds claims 19-34.

Claims 5-12 and 15-34 are pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-8, 15 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.* Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, and Grushin et al. (US 2002/0121638 A1), for reasons of record in the Office action mailed October 18, 2006.

4. Claims 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.* Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, and Grushin et al. (US 2002/0121638 A1), as applied to claims 5-8, 15 and 16 in the Office action mailed October 18, 2006.

The device of claims 21 and 25 is required to further comprise an electron transporting layer over the hole blocking layer. O'Brien et al. disclose a device having an electron transporting layer between a hole blocking layer and a cathode. Baldo et al. disclose a device having an electron transporting layer between a hole blocking layer and a cathode.

5. Claims 19, 20, 22-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.* Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, and Grushin et al. (US 2002/0121638 A1), as applied to claims 5-8, 15 and 16 in the Office action mailed October 18, 2006, and further in view of Böhler et al. (US 6,262,441 B1).

The limitations recited in present claims 19, 20, 22-24 and 26 pertain to structural features known in the art at the time of the invention to be useful in the construction of light emitting displays. For example, Böhler et al. disclose OLED displays that are active light emitting devices and teach that polarization filters may be included in the display structure, and thin film transistors may be used to drive the individual pixels of the display. For example, see column 3, lines 32-41 of the Böhler patent. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate structural features known in the art at the time of the invention.

6. Claims 9-12, 17 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.*

Art Unit: 1774

Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, Grushin et al. (US 2002/0121638 A1) and Kreuder et al. (US 6,329,082 B1), for reasons of record in the Office action mailed October 18, 2006.

7. Claims 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.* Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, Grushin et al. (US 2002/0121638 A1) and Kreuder et al. (US 6,329,082 B1), as applied to claims 9-12, 17 and 18 in the Office action mailed October 18, 2006.

The device of claims 29 and 33 is required to further comprise an electron transporting layer over the hole blocking layer. O'Brien et al. disclose a device having an electron transporting layer between a hole blocking layer and a cathode. Baldo et al. disclose a device having an electron transporting layer between a hole blocking layer and a cathode.

8. Claims 27, 28, 30-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. in *Appl. Phys. Lett.* Vol. 74, No. 3, pp. 442-444 or Baldo et al. in *Appl. Phys. Lett.* Vol. 75, No. 1, pp. 4-6, either reference in view of Salbeck et al. in *Synthetic Metals* 91, pp. 209-215, Grushin et al. (US 2002/0121638 A1) and Kreuder et al. (US 6,329,082 B1), as applied to claims 9-12, 17 and 18 in the Office action mailed October 18, 2006, and further in view of Böhler et al. (US 6,262,441 B1).

The limitations recited in present claims 27, 28, 30-32 and 34 pertain to structural features known in the art at the time of the invention to be useful in the construction of light emitting displays. For example, Böhler et al. disclose OLED displays that are active light emitting devices and teach that polarization filters may be included in the display structure, and thin film transistors may be used to drive the individual pixels of the display. For example, see column 3, lines 32-41 of the Böhler patent. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate structural features known in the art at the time of the invention.

9. Applicant's arguments filed January 18, 2007 have been fully considered but they are not persuasive.

Applicant argues that the EL element of the present invention has superior durability due to the combination of spiro compounds required by the present claims. It is the examiner's position that improved durability due to the use of spiro compounds is not unexpected given the teachings of Salbeck et al. Salbeck's teachings would motivate one of ordinary skill in the art at the time of the invention to utilize spiro compounds in place of corresponding non-spiro compounds (e.g. to use spiro-CBP in place of CBP) in order to increase morphologic stability of an organic electroluminescent device.

Applicant further argues that the structure of Salbeck is significantly different from that of the invention of O'Brien or Baldo. Applicant argues that one skilled in the art would therefore not combine Salbeck with O'Brien or Baldo. Salbeck's EL device has at least one organic active

layer between a pair of electrodes whereas the EL devices of O'Brien and Baldo have multiple organic active layers between a pair of electrodes. While the devices structures are not identical, Salbeck's teachings of improved morphological stability by use of compounds having a spiro-linkage is relevant to EL devices in general.

Applicant further argues that the examiner has provided no explanation as to why one skilled in the art would have knowledge of the Salbeck reference. One skilled in the art of EL devices would have knowledge of the Salbeck reference because it pertains to EL devices and was published in a scientific journal that is known to publish articles relevant to EL device materials.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1774

11. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY
March 26, 2007



MARIE YAMNITZKY
PRIMARY EXAMINER

1774